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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MARTIN WEIBRECHT

Appeal 2016-003523
Application 13/511,018[1]
Technology Center 1600

Before DONALD E. ADAMS, ERIC B. GRIMES, and DAVID COTTA, *Administrative Patent Judges*.

COTTA, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a method of correcting tracer-uptake measurements for a patient. The Examiner rejected the claims on appeal as directed to patent-ineligible subject matter.

We affirm.

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[1] According to Appellant, the real party in interest is Koninklijke Philips N.V. App. Br. 2.

STATEMENT OF THE CASE

The Specification teaches that "[i]n several cancer diseases, 2-[^{18}F]-Deoxy-D-Glucose (FDG) is applied for monitoring response to therapy." Specification p. 1, ll. 6–7. The Specification further teaches: "[i]t has been shown that decreasing uptake correlates with better response to the applied therapy. Likewise, the same or even increased tracer-uptake correlates with poor response." *Id.* at p. 1, ll. 9–11. 2–3. Monitoring tracer uptake is complicated because uptake is a "dynamic process." *Id.* at p. 1, ll. 16–17. "Depending on the tracer, the disease, and further aspects, the maximum uptake is reached at different times post injection (p.i.)." *Id.* at p. 1, ll. 21–22. Prior art tomographic systems suffer from the problem that "there is no consideration taken to added complexity caused by a variable delay between the tracer injection and the measurement of the lesion uptake." *Id.* at p. 2, ll. 7–8. The inventors claim to have solved this problem, using a "tracer-uptake correction method and a system that correct[s] for variation in time between injection and acquisition." *Id.* at p. 2, ll. 13–14.

Claims 1–13 are on appeal. Claim 1 is illustrative and reads as follows:

> 1. A method of correcting tracer-uptake measurements for a patient, comprising:
>
> receiving input data about said patient including data indicating how tracer uptake values $(TUV)_{meas}$ varies with time T_{meas},
>
> determining whether the input data includes tracer-impact data that impact the tracer-uptake measurements for said patient,
>
> selecting tracer-uptake reference data based upon said tracer impact data,

> comparing the tracer-uptake reference data with said tracer uptake values $(TUV)_{meas}$, and based on the comparing;
>
> applying a correction of the tracer-uptake measurements for said patient.

App. Br. 12.

The Examiner rejected claims 1–13 under 35 U.S.C. § 101 as directed to patent-ineligible subject matter.

ANALYSIS

Determination of subject matter eligibility involves a two-step test. First one must determine if the claimed subject matter is directed to a judicially recognized exception. *Mayo Collaborative Serves. v. Prometheus Lab., Inc.* 132 S. Ct. 1289, 1297 (2012). If the claims address a judicially recognized exception, the next step is to determine if the claims recite additional elements that transform the nature of the claim. *Id.*

In rejecting claims 1–13 as directed to patent-ineligible subject matter, the Examiner first determined that the claims were drawn to an abstract idea comprised of "calculations" and "computational steps." Final Act. 2–3. The Examiner then concluded that the claims "contain no additional steps that impart a practical application of [the] abstract idea." *Id.* at 3. We agree with the Examiner that the claims are directed to patent-ineligible subject matter.

With respect to the first step of the subject matter eligibility determination, we find that the claims are directed to an abstract idea. The Federal Circuit addressed the patentability of method claims similar to those at issue here in *University of Utah Res. Foundation v. Ambry Genetics Corp.,* 774 F.3d 755 (Fed. Cir. 2014). The method claims at issue in *Ambry* involved methods of comparing the sequence of a wild-type BRCA1 gene with the sequence obtained from a human subject. *Id.* at 761. In *Ambry,* the

court found that the claimed subject matter was patent ineligible because "it claimed an abstract mental process of 'comparing' and 'analyzing' two gene sequences." *Id.* at 763.

Claim 1, like the claims in *Ambry,* is directed to a mental comparison. As in *Ambry*, claim 1 "recites nothing more than the abstract mental steps necessary to compare." *Id.* Claim 1 thus requires receiving data ("receiving input data . . . "), analyzing it ("determining whether . . . "), picking data for use in a comparison ("selecting tracer-uptake reference data . . . "), performing the comparison ("comparing . . . "), and applying a correction based on the comparison ("applying . . . "). All of these steps can be performed mentally and, thus constitute a patent ineligible mental process. *Elec. Power Grp. LLC* v. *Alstom,* 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (collecting information and "analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category."); *CyberSource Corp.* v. *Retail Decisions, Inc.,* 654 F.3d 1366, 1373 (Fed. Cir. 2011) (". . . a method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101.").

Appellant argues that the claimed step of applying a correction cannot be mentally performed because the correction "inherently must be externally performed in order to affect the patient." Reply Br. at 4. Claim 1, however, does not require that the correction have any effect upon the patient. It requires, "applying a correction of the tracer-uptake measurements for said patient." There is nothing in this claim language that requires the step to be "externally performed." Indeed the claim simply requires correcting measurements, which can be done mentally. This is consistent with the way

corrections are described as being applied in the Specification, where the correction simply results in a "new correction curve." *See e.g.,* Spec. p. 10, ll. 24–26 ("By applying a correction of the tracer-uptake measurements for said patient based on said correction indicator it results in a new correction curve (C_{corr}) of the tracer dynamics that is based on the actual measurement.").

With respect to the second step of the subject matter eligibility determination, we find that claim 1 does not recite additional elements that transform the nature of the claim. Step two of the eligibility determination is "a search for an 'inventive concept' – i.e., an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Alice Corp. Pty. Ltd. v. CLS Bank Int'l,* 134 S. Ct. 2347, 2355 (2014). We see nothing in the subject matter claimed that transforms the claimed mental process into an inventive concept. As discussed above, claim 1 recites nothing more than the abstract mental steps necessary to compare reference uptake data with measured uptake values. None of the method steps, viewed "both individually and 'as an ordered combination,'" transform the nature of the claim into patent-eligible subject matter. *See Alice,* 134 S. Ct. at 2355 (quoting *Mayo,* 132 S. Ct. at 1297, 1298). All of the limitations of claim 1 are directed to well-understood, routine, conventional activities.

Appellant argues that, like the claims in *Diamond v. Diehr,* 450 U.S. 175 (1981), the claims at issue here modify and improve a real-world process. App. Br. 8–9. Appellant thus contends:

> Under conventional industry practice, no consideration is taken to the added complexity caused by a variable delay between the tracer injection and the measurement of the

> lesion uptake. (*See* Specification, p. 2, 11. 3-8). The claims at issue solve this technological problem.

Id. at 9.

The Court in *Diamond* found that a claim employing a mathematical formula in a manufacturing process was patent eligible, because it "applie[d] that formula in a structure or process which, when considered as a whole, [was] performing a function which the patent laws were designed to protect (*e. g.,* transforming or reducing an article to a different state or thing)." *Diamond,* 450 U.S. at 192. Unlike the process claimed in *Diamond*, which was directed to a specific industrial process, i.e., "a physical and chemical process for molding precision synthetic rubber products," *id.* at 184, claim 1 merely recites a process for manipulating information. Claim 1 is thus closer to *Mayo* – in which the Court found unpatentable claims that "simply tell doctors to gather data from which they may draw an inference in light of [] correlations" (*Mayo* 132 S. Ct. at 1298) – than it is to *Diehr.*

Appellant argues that "[g]iven the particularities of the way in which each operation is performed, independent claim 1 cannot and does not preempt the making, using and selling of basic tools of scientific and technological work." App. Br. 10. Accordingly, Appellant contends that the claims are patent eligible because they do not preempt "the making, using, and selling of basic tools of scientific and technological work." *Id.* But even taking this as true, "the absence of complete preemption does not demonstrate patent eligibility." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.,* 788 F.3d 1371, 1379 (Fed. Cir. 2015).

Accordingly we affirm the Examiner's rejection of claim 1 as directed to patent ineligible subject matter. Appellant contends that claim 12 is

patent eligible for the same reasons as claim 1. App. Br. 7. Accordingly we affirm the Examiner's rejection of claim 12 for the reasons discussed with respect to claim 1.

Appellant contends that "each of the[] dependent claims includes additional elements that further establish each of these dependent claims is not within the Court's implicit exception to subject matter eligibility." Appellant, however, does not argue any of the dependent claims with particularity, limiting the argument on the dependent claims to the above quoted sentence. This is not sufficient to show error in the Examiner's rejection. *See* 37 C.F.R. § 41.37(c)(1)(iv) (noting that an argument that merely points out what a claim recites is unpersuasive). As Appellant does not provide substantive argument with respect to the independent patentability of claims 2–11 and 13, these claims fall with claim 1. *Id.*

SUMMARY

For these reasons and those set forth in the Examiner's Answer, and the Final Office Action, the Examiner's final decision to reject claims 1–13 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED